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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,288	03/12/2004	Michael T. Costello	0178-PA	8266

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Michael P. Dilworth
Crompton Corporation
Benson Road
Middlebury, CT 06749

EXAMINER

GOLOBOY, JAMES C

ART UNIT	PAPER NUMBER
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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/800,288	Applicant(s) COSTELLO ET AL.	
	Examiner James Goloboy	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8, 10-16, 19, 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 10-16, 19, 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The rejections of claims 1-5, 8, 10-16, 19, and 21-28 are maintained. Newly added claims 29-40 have also been rejected.

Claim Objections

2. Claims 29, 33, and 37 are objected to because of the following informalities: In line 3 of claims 29, 33, and 37, "extant" should be "extent". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 29-40 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a specific composition meeting the limitations of claims 29-40, does not reasonably provide enablement for the full scope of the claims, which covers every composition of claims 1, 12, and 23 where the antioxidant and biocide are present in amounts sufficient to reduce oxidative and biological degradation" to a greater extent than if only one was present in amount equal to the sum of the amounts of the antioxidant and biocide. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Claims 29, 33, and 37

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allow for many combinations of antioxidants and biocides (numbering in the thousands for claims 29 and 33), and any concentration of those additives sufficient to produce the claimed result. However, the specification does not provide any guidance as to which concentrations of antioxidants and biocides are sufficient for the claimed compositions and methods, outside of compositions containing 0.25% by weight of antioxidant and 0.25% by weight of biocide, and even those compositions only use one specific biocide and several different antioxidants. It is therefore the examiner's position that practicing the full scope of the claims would require undue experimentation, specifically the evaluation of oxidative and biological degradation for many thousands of compositions, plus the comparative compositions comprising only antioxidant or only biocide.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 29-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 29-40 require that the antioxidant and biocide be "present in amounts sufficient to reduce oxidative and biological degradation" to a greater extent than if only one was present in amount equal to the sum of the amounts of the antioxidant and biocide. However, applicant has not defined how "oxidative degradation" or "biological degradation" is to be measured, and it is apparent from the examples in the specification that there are numerous tests for both, which often give conflicting results.

Claim Rejections - 35 USC § 103

7. Claims 1-3, 10, 12-14, 21, and 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Bennett.

The rejections of claims 1-3, 10, 12-14, 21 are adequately set forth in paragraph 3 of the office action mailed 4/5/07, which is incorporated here by reference. Csikos discloses on page 2 lines 30-31 that the composition comprises 0.1 to 0.3% by mass of antioxidant and 0.01 to 0.5% by weight of biocide, encompassing the concentrations recited in claims 31-32 and 35-36, and the ratio recited in claims 30 and 34. As claims 31-32 and 35-36 are dependent on claims 29 and 33 respectively, the concentrations of Csikos must encompass or overlap the ranges required by those claims.

8. Claims 4-5 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of Crompton Corporation (http://www.cromptoncorp.com/servlet/ContentServer?pagename=Crompton/ck_article/pressrelease&c=ck_article&cid=1042056763595&type=whatsnew and http://www.cromptoncorp.com/servlet/ContentServer?pagename=ck/pressrelease&c=ck_article&cid=1003866980424&p=984583117820&type=whatsnew).

This rejection is adequately set forth in paragraph 4 of the office action mailed 4/5/07, which is incorporated here by reference.

9. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos, Emert, and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of Calabrese (U.S. Pat. No. 6,348,514).

This rejection is adequately set forth in paragraph 5 of the office action mailed 4/5/07, which is incorporated here by reference.

10. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos, Emert, and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of Yamazaki (U.S. Pat. No. 6,075,065).

This rejection is adequately set forth in paragraph 6 of the office action mailed 4/5/07, which is incorporated here by reference.

11. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos, Emert, and Bennett as applied to claims 1-3, 10, 12-14, and 21 above, and further in view of McEntee (U.S. Pat. No. 4,624,679).

This rejection is adequately set forth in paragraph 7 of the office action mailed 4/5/07, which is incorporated here by reference.

12. Claims 1-3, 10-14, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields (U.S. Pat. No. 5,981,632).

This rejection is adequately set forth in paragraph 8 of the office action mailed 4/5/07, which is incorporated here by reference.

13. Claims 23-28 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Crompton Corporation.

The rejection of claims 23-28 is adequately set forth in paragraph 9 of the office action mailed 4/5/07, which is incorporated here by reference. Csikos discloses on page 2 lines 30-31 that the composition comprises 0.1 to 0.3% by mass of antioxidant and 0.01 to 0.5% by weight of biocide, encompassing the concentrations recited in claims 39-40, and the ratio recited in claim 38. As claims 39-40 are dependent on claim 37, the concentrations of Csikos must encompass or overlap the range required by claim 37.

14. Claims 23-25, 27, and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Calabrese.

The rejection of claims 23-25 and 27 is adequately set forth in paragraph 10 of the office action mailed 4/5/07, which is incorporated here by reference. Csikos discloses on page 2 lines 30-31 that the composition comprises 0.1 to 0.3% by mass of antioxidant and 0.01 to 0.5% by weight of biocide, encompassing the concentrations

recited in claims 39-40, and the ratio recited in claim 38. As claims 39-40 are dependent on claim 37, the concentrations of Csikos must encompass of overlap the range required by claim 37.

15. Claims 23-24 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of Yamazaki.

The rejection of claims 23-24 is adequately set forth in paragraph 11 of the office action mailed 4/5/07, which is incorporated here by reference. Csikos discloses on page 2 lines 30-31 that the composition comprises 0.1 to 0.3% by mass of antioxidant and 0.01 to 0.5% by weight of biocide, encompassing the concentrations recited in claims 39-40, and the ratio recited in claim 38. As claims 39-40 are dependent on claim 37, the concentrations of Csikos must encompass of overlap the range required by claim 37.

16. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Csikos in view of Emert and Fields as applied to claims 1-3, 10-14, and 21-22 above, and further in view of McEntee.

The rejection of claims 23-24 is adequately set forth in paragraph 12 of the office action mailed 4/5/07, which is incorporated here by reference. Csikos discloses on page 2 lines 30-31 that the composition comprises 0.1 to 0.3% by mass of antioxidant and 0.01 to 0.5% by weight of biocide, encompassing the concentrations recited in claims

39-40, and the ratio recited in claim 38. As claims 39-40 are dependent on claim 37, the concentrations of Csikos must encompass of overlap the range required by claim 37.

Response to Arguments

17. Applicant argues that Csikos, Emert, and Bennett are not properly combined, and that the examiner has made "two separate combinations, neither of which can independently teach the entire claim". To the contrary, the examiner has made one combination, comprising three references, which together do teach the entire claim. Applicant's position implies that the only proper combinations are of only two references; however, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). Applicant further argues that Csikos does not disclose a relationship between the antioxidant and biocide. This argument actually supports the examiner's position, as it allows for the antioxidant and biocide to be independently selected from prior art antioxidants and biocides, without need for the prior art references to discuss a relationship between the two additives.

Applicant also argues that no motivation for has been shown for combining the references. Paragraph 3 of the office action mailed 4/5/07, which has been incorporated by reference herein, clearly states motivation for using the antioxidants of Emert and the biocides of Bennett as the antioxidants and biocides in the composition of Csikos.

Applicant further argues that the rejections of claims 1 and 12, and their dependent claims, are overcome due to a showing of unexpected results. However,

unexpected results must be commensurate with the scope of the claims. See MPEP 716.02(d) and 2145. Claims 1, 12, and 23 require that the antioxidant and biocide are present "in amounts sufficient to reduce oxidative and biological degradation". The examiner's position is that any amount of antioxidant and biocide will reduce oxidative and biological degradation to some extent, and that the alleged unexpected results, which are achieved only with a composition comprising 0.25% by weight of antioxidant and 0.25% by weight of biocide, are clearly not commensurate with the full scope of the claim. Additionally, claims 1 and 12 recite the class of triazines as a biocide, while the examples only use a specific triazine (Triadine 3). Evidence of superior properties in one species is insufficient to establish the nonobviousness of a subgenus containing hundreds of compounds. *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/
Acting SPE of Art Unit 1797